VOLUME 12 SPECIAL ISSUE

PEAT AND COAL: ORIGIN, FACIES, AND DEPOSITIONAL MODELS

PAUL C. LYONS and BORIS ALPERN (Editors)

Contents

Dedication vii
Preface and Acknowledgements ix
Introduction xi

Part I: Overview
The genesis of coal from the viewpoint of coal petrology
M. Teichmüller 1

Part II: Modern Peat Systems
The ecology of peat-forming processes: a review
P.D. Moore 89
The geology, botany and chemistry of selected peat-forming environments from temperate and tropical latitudes
C.C. Cameron, J.S. Esterle and C.A. Palmer 105
The Changuinola peat deposit of northwestern Panama: A tropical, back-barrier, peat (coal)-forming environment
A.D. Cohen, R. Raymond, Jr., A. Ramirez, Z. Morales and F. Ponce 157

Part III: Ancient Peat Systems
Organics versus clastics: conditions necessary for peat (coal) development
L. Courel 193
The features of Devonian coal-bearing deposits in South China, The People's Republic of China
Han Dexin 209
An Appalachian-sourced deltaic sequence, northeastern Alabama, U.S.A.: biofacies-lithofacies relationships and interpreted community patterns
R.A. Gastaldo, M.A. Gibson and T.D. Gray 225
Evolution of some depositional models in Late Carboniferous rocks of the Appalachian coal fields
J.C. Ferm and G.A. Weisenfluh 259
A thrust-ridge paleodepositional model for the Upper Freeport coal bed and associated clastic facies, Upper Potomac coal field, Appalachian basin, U.S.A.
E.S. Belt and P.C. Lyons 293
Marine origin of pyritic sulfur in the Lower Bakerstown coal bed, Castleman coal field, Maryland (U.S.A.)
P.C. Lyons, J.F. Whelan and F.T. Dulong 329
Diachronism and tripartition of peat accumulation in paralic paleoenvironments, Carboniferous and Cenozoic sequences in northwestern Europe
M.J.M. Bless and E. Paproth 349
Paleodepositional environments and tectono-sedimentary controls of the postglacial Permian coals, Karoo Basin, South Africa
B. Cairncross 365
Sedimentological and petrographical characteristics of Cretaceous strandplain coals: a model for coal accumulation from the North American Western Interior Seaway
W. Kalkreuth and D.A. Leckie 381

Part IV: Peat and Coal Facies
Facies in the Lower Kittanning coal bed, Appalachian Basin (U.S.A.)
F.T.C. Ting 425
Observations on the nature and origin of fusain
A.C. Scott 443
Phyterals of humic coals in the U.S.S.R.
A.V. Lapo and I.N. Drozdova 477
Paleoenvironments of lacustrine coals — the occurrence of algae in humic coals
H.W. Hagemann and M. Wolf 511
A late Stephanian forest swamp with *Sporangiostrobus* fossilized by volcanic ash fall in the Puertollano Basin, central Spain
R.H. Wagner 523
An appraisal of coal petrographic facies in Lower Gondwana (Permian) coal seams of India
G.K.B. Navale and R. Saxena 553
Permian coals of eastern Australia: geological control of petrographic variation
J.W. Hunt 589
Organic petrology and clastic depositional environments with special reference to Australian coal basins
M. Smyth 635
Depositional setting and paleobotany of Permian and Triassic permineralized peat from the central Transantarctic Mountains, Antarctica
E.L.Taylor, T.N. Taylor and J.W. Collinson 657
Macro- and micro-factors affecting coal-seam quality and distribution in southern Africa with particular reference to the No. 2 seam, Witbank coalfield, South Africa
R.M.S. Falcon 681
Peat-forming materials and evolution of swamp sequences — case analysis of a Jurassic inland coal basin in China
Fen Miao, Lijun Qian and Xiuyi Zhang 733
Rocky Mountain Tertiary coal-basin models and their applicability to some world basins
R.M. Flores 767